Abstract of the Disclosure

A system and method for logging and restoring the state of execution of resource transactions in a shared system resource, such as a file server, by logging and restoration of state machine information defining state machines representing the state of execution of resource transactions. A system resource includes a system resource sub-system and one or more control/processing sub-systems, each including a resource control processor performing system resource operations and controlling operations of the system resource sub-system and a state machine logging mechanism. Each state machine logging mechanism includes a state machine log generator for extracting state machine information defining a state machine representing a current state of execution of a system resource operation of the corresponding control/processing sub-system and a state machine log for storing the state machine information of the corresponding control/processing sub-system and may read the state machine information to restore the state of execution of an operation of the corresponding control/processing sub-system. Each state machine logging mechanism may includes a state machine log mirroring mechanism for receiving and storing mirror copies of the state machine information of the other control/processing sub-system and may read the mirror copies to the other control/processing sub-system to restore the state of execution of an operation of the other control/processing sub-system.

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